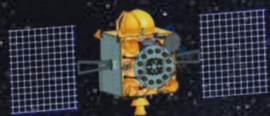
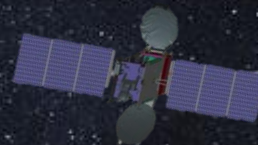




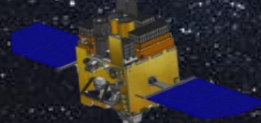
Navigation



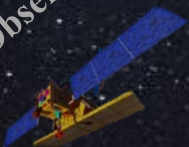
Communication



Scientific Mission



Earth Observation



Gaganyaan



**International Conference on
Spacecraft Mission Operations (SMOPS-2023) with theme of
Emerging Technologies for Automation in Ground and Space
Segment in satellite mission operations (ETAGS)**

Date : 8th and 9th June, 2023

Mission Ops



Conference Theme

The objective of this unique conference is to associate and connect with the various space agencies, start-ups, industry and academia within and outside India. The conference aims to bring all space leaders together to share their views on existing technologies and its challenges, while previewing the state of the art technologies that are being conceived globally to make space mission operations more secure and robust. This conference will also provide a unique platform for ISRO to boost the synergy between academia, industry and other space agencies.

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Present And Future Trend In S/C Operations And Mission Design

- ✚ Autonomous Satellite Design
- ✚ End of life Mission management
- ✚ Emergency and Contingency Operation Methodologies
- ✚ Mission Management Using Electric Propulsion Systems

Security Of Ground And Space Assets

- ✚ Space Data Policy and Data Security
- ✚ Cyber Security and Network Security
- ✚ International Treaties and Conventions

Automation in Spacecraft Operations

- ✚ On-board Automation
- ✚ Lost In Space Recovery Techniques
- ✚ Methodologies For Attitude Accuracy Improvement
- ✚ Automation In Mission Operations Management
- ✚ Automation In Ground Resource Configuration

Present And Future Trend In Ground Station Operations

- ✚ Deep Space Network array design
- ✚ Optical and quantum communications
- ✚ Cross support and interoperability
- ✚ Data acquisition system design
- ✚ Cloud based Ground system architecture
- ✚ Ground station software architecture and design
- ✚ Advance Radar design and application for space object tracking
- ✚ Satellite Communications in spectral bands (viz. 5-G, 6-G, X-band, V-band etc.)

Space Debris Mitigation

- ✚ Detection and maintenance of debris catalogue
- ✚ Operational strategy for debris hazard mitigation
- ✚ Space debris removal technique
- ✚ Corrective measures for space debris management

Challenges in Flight Dynamics Operations

- ✚ Precise Orbit Determination
- ✚ Autonomous Navigation Techniques For Space Object Viz. GNSS, Navic
- ✚ Re-entry Prediction For Non-cooperative Objects
- ✚ Precise Orbit Propagation

Trends In Ground Segment Resource Allocation And Optimisation

- ✚ Optimal Resource Allocation And Scheduling In Multi-mission Scenario
- ✚ Near Real-time Emergency Requirements Handling
- ✚ Science Mission Payload Proposal Processing Chain
- ✚ Space Science Data Dissemination Policy
- ✚ Control Centre Design
- ✚ Cloud Based Mission Operation Management System Architecture

Satellite Constellations Management

- ✚ Challenges in its maintenance
- ✚ Multi-mission management strategy
- ✚ Data relay and Inter satellite communication design

Simulation And Modelling

- ✚ Guidance And Control Techniques
- ✚ Small Satellite Control Strategy
- ✚ Orbital Disturbance Modelling
- ✚ Optimal Trajectory Design (Landing And Re-entry Mission)
- ✚ Reference Constellation For Navigation Of Interplanetary/Lunar Mission

Focus Area

Artificial Intelligence Based Applications

- Guidance and Control
- Orbit Determination and Propagation
- S/C Operations and Applications
- Constellation Management
- Landing and Re-entry Algorithm
- Sub-system Performance Evaluation
- Autonomous Satellite Design and Mission Management

Human Spaceflight Mission Operation Management

- Mission operations management
- Ground segment architecture design
- Reliability aspect for ground and space segment
- Crew Training and simulation facility design
- Mission Operation Training and simulation
- Ascent and Descent Trajectory Design
- Recovery and rehabilitation strategy
- Crew Life support system design

Important Dates

1	Announcement of Conference	Sep 7, 2022
2	Abstract Submission & Registration starts	Sep 15, 2022
3	Last Date of Abstract Submission	Oct 15, 2022
4	Notification of acceptance	Oct 30, 2022
5	Call for Final Paper Submission	Nov 15, 2022
6	Last Date of Final Paper Submission	Jan 31, 2023
7	Last Date of Author Registration	Mar 15, 2023
8	Last Date of Non-author Registration	Apr 15, 2023
9	Conference Date	June 8-9, 2023



Contact Us

Email-id : smops2023@istrac.gov.in, asi@ursc.gov.in

Website : www.smops2023.istrac.gov.in , www.asindia.org

